STATE OF ILLINOIS

ILLINOIS COMMERCE COMMISSION

Illinois-American Water Company	**}**	
	}	**Docket No: 07-0507**
	}	
Proposed general increase in water and sewer rates.	**}**	

DIRECT TESTIMONY OF

ERIC P. ROTHSTEIN

ON BEHALF OF

THE PEOPLE OF THE STATE OF ILLINOIS

January 2008

AG Exhibit 2.0

STATEMENT OF QUALIFICATIONS

Q. Please state your name and business address.

A. My name is Eric Paul Rothstein. My address is 740 S. Federal St. #1101, Chicago IL, 60605

Q. What is your current occupation?

A. I am a management consultant specializing in water and wastewater utility strategic and financial planning, rate-making, and contract negotiation.

Q. Please summarize your education and professional certifications?

A. I hold a Bachelor's Degree from Ripon College in Ripon, Wisconsin where I majored in Economics and History and a Master's Degree in Economics from the University of California, Davis. I also am a Certified Public Accountant licensed in the State of Oregon.

Q. Please summarize your professional experience?

A. From 1984 to 1994, I was employed by the City of Austin, Texas, initially in the position of Performance Auditor in the City's Audit Department, then as a Division Manager in the City's Resource Management Department, largely responsible for planning and evaluating energy and water conservation programs, and then as a Financial Manager for the City's Water and Wastewater Utility Department, with responsibility for all aspects of utility finance and rate-making.

From 1994 to 2007, I was employed by CH2M HILL as a Management Consultant in their Water Business Group. While at CH2M HILL, I participated in

numerous strategic and financial planning engagements, rate studies, and utility management projects largely for publicly-owned water and wastewater utilities and industry research foundations. In addition, I held increasingly responsible administrative positions within CH2M HILL's Water Business Group ultimately including leadership of the Water Business Group's utility management consulting practice.

Utility finance and rate analysis clients have included the Honolulu Board of Water Supply, City and County of Honolulu, San Francisco Public Utility Commission, East Bay Municipal Utility District, City of Portland OR, Seattle Public Utilities, City of Salem OR, City of Boise, Tucson Water Department, City of Fort Worth, City of Houston, City of Atlanta, Augusta-Richmond County GA, Clayton County Water Authority GA, DeKalb County, GA, Orlando Utilities Commission, Seminole County (FL), City of Cleveland, City of Akron, Northeast Ohio Regional Sewerage District, City of Lethbridge, AB, City of Winnipeg, MB and the Government of Egypt Ministry of Housing, Utilities and Urban Development. In addition, I served on research teams for American Water Works Association Research Foundation (AwwaRF) projects addressing evaluation of public-private partnership options, capital improvement planning, strategic planning and asset management.

In April 2007, I established The Rothstein Group, LLC and joined a long-time colleague, Deborah Galardi of Galardi Consulting LLC, to do business as Galardi Rothstein Group.

Q. Please describe your involvement in water and wastewater industry professional associations.

A. I have been a member and Vice Chair of the American Water Works

Association's Rates and Charges Committee since 1992 and served as a contributing author and reviewer for the Committee's promulgation of the ***Water Rates and Charges*** (M1) Manual of Practice. Prior to that effort, I chaired the sub-committee's work group that developed the ***Water Rate Structures and Pricing*** (M29) Manual of Practice. In addition, I have participated in numerous technical sessions, workshops, and publication reviews sponsored by the Rates and Charges Sub-Committee.

I have been a member of the American Water Works Association's Competitive Practices Committee since 1999, serving as Chair from 2001 to 2005. I have participated and coordinated numerous technical sessions, workshops, and publication reviews sponsored by the Competitive Practice Committee.

On the wastewater side, I have served as Chair of the Finance and Administration Sub-Committee of the Water Environment Federation's Utility Management Committee since 2002. Through that sub-committee, I have participated in and coordinated numerous technical sessions, workshops, and publication reviews. In addition, I chaired the sub-committee's task force responsible for promulgation of the ***Financing and Charges for Wastewater Systems*** (M29) Manual of Practice.

I am also a member of the International Water Association, serving on its Economics and Statistics Specialists Group, of the Wisconsin Water Association's Water Efficiency Committee, and of the Alliance for Water Efficiency.

Q. How you ever testified before a state public utility commission about water or wastewater issues?

A. No.

INTRODUCTION AND SUMMARY OF TESTIMONY

Q. On whose behalf are you testifying?

A. I am testifying on behalf of the People of the State of Illinois as represented by the Illinois Attorney General's Office ("AG") in response to the Illinois American Water Company ("IAWC") filing for a *"Proposed General Increase in Water and Sewer Rates and Revisions in Other Terms and Conditions of Service"* submitted August 21, 2007.

Q. What is the purpose of your testimony?

A. I am addressing issues related to the general comparability of water and wastewater rates and costs for private water and wastewater utilities and publicly owned water and wastewater utilities; the reasonableness of IAWC costs in the Chicago Metro District of selected utility functions; and the reasons for differences between water rates charged by IAWC and those charged by municipally owned utilities in the Chicago metropolitan area.

Q. Have you reviewed a comparison of IAWC water and sewer rates in the Chicago Metro District and the rates paid by residential customers in neighboring communities that are supplied with water and sewer services by their municipality?

A. Yes. I have reviewed an exhibit presented by the complainant in ICC Docket No. 05-0681 et al, entitled Grens Exhibit 1. That exhibit shows the water and sewer or wastewater rates for IAWC's Southwest Suburban District and for the Villages of Woodridge, Darien, and Downers Grove from September 2004 through January, 2006. To review current information, I calculated the bills for these areas for 7,000 gallons of water using current municipal rates and IAWC rates for Southwest Suburban, DuPage and Chicago Suburban. Exhibit EPR-1 shows the

rates used to calculate Table 1. I have not included any taxes or other charges not imposed by the utility, except where indicated. I have added Wheaton, which I included in my analysis. The utility charges for 7,000 gallons of water and wastewater service are as follows.

Table 1

Water and Wastewater Charges for Selected Chicago Area Utilities Based on 7000 Gallons of Billable Volume			
Utility	**Water Service Charges**	**Wastewater Service Charges**	**Notes**
IAWC SW Suburban	$63.03	$45.52	
IAWC DuPage District	$54.94	$18.23	Collection Only
IAWC DuPage District, County Club Area		$14.29	Treatment Only
IAWC Chicago Suburban	$58.34	$18.23	Collection Only
Woodridge *Incorporated*	$24.51	$14.27	
Darien *Incorporated*	$25.41	$18.10	
Darien *Unincorporated*	$34.93	$18.10	
Downers Grove *Incorporated*	$25.41	$18.70	
Downer's Grove *Unincorporated*	$29.47	$18.70	
Lemont	$43.52	$7.50	
Wheaton *(10 ccf or 7500 gls)*	$21.50	$18.00	Sanitary sewer & stormwater mgmt

Q. What does the above table indicate?

A. The monthly charges for 7,000 gallons of water are significantly higher for IAWC

– Southwest Suburban, DuPage, and Chicago Suburban customers than for these neighboring, municipally served communities.[1] The wastewater charges for IAWC's Southwest Suburban area are also significantly higher than the wastewater charges of the municipal systems. The wastewater charges of the DuPage and the Chicago Suburban areas of Chicago Metro are closer to neighboring municipal systems' charges but are not directly comparable because the IAWC districts only include collection of wastewater – not treatment.

Q. What is the significance of this rate comparison?

A. The disparity in charges between municipally owned systems and investor owned systems raises the question of whether the costs and rates of the investor owned system are reasonable.

Q. How is the rest of your testimony organized?

A. The rest of my testimony, which analyzes the costs, rates, and accounting of municipal and investor-owned utilities, is organized into several sections. Section I provides a review and commentary on IAWC's Exhibit 10.20: *Analysis of Water Rates, Fees, and Charges for Selected Cities in the Vicinity of the Chicago Metro District of Illinois American Water Company*, sponsored by IAWC witnesses Uffelman and Kane. Section II provides a review of IAWC costs as compared to national cost benchmarks reporting performance indicators for publicly-owned water utilities. Section III provides an analysis of water rates and cost structures for selected communities in the vicinity of the Chicago Metro District of Illinois American Water Company to affirm, contrast or place into fuller context the testimony of Uffelman and Kane. Section IV addresses capital expenses,

[1] There are approximately 28,000 customers in the Southwest Suburban area, 4,300 customers in the Chicago Suburban area, and about 6,150 customers in the DuPage area, ICC Docket 07-0195, Direct Testimony of Rich Kerckhove, IAWC Ex. 1.0 at 3-4, filed on e-docket August 7, 2007.

Section V recommends an adjustment to the O&M for the Chicago Metro District, and Section VI addresses the wastewater charges imposed in the Chicago Metro District.

ANALYSIS

Section I: IAWC Exhibit 10.20 Review

Q. Please provide a summary of your review of IAWC's Exhibit 10.20?

A. Uffelman and Kane have provided a comprehensive review of the differences in revenue requirements under the utility basis primarily used by privately owned, state regulated utilities and the cash basis approach primarily used by municipal utilities. In so doing, they argue that a *prima facie* comparison of IAWC rates with those of municipally owned water utilities in the Chicago Metro District is not feasible and cannot be used to support a conclusion that IAWC water rates are unreasonable. IAWC Ex. 10.20 at 32. By the same token, however, the complications in effecting comparisons also do not support a conclusion that IAWC's rates are reasonable. Rather, detailed and more specific analysis of individual cost components is required, and comparisons to specific attributes of municipal utilities may inform these assessments.

Q. What general questions or concerns arise from your review of IAWC's Exhibit 10.20 that suggest further review of differences in regional municipal vs. IAWC water and sewer rates is warranted?

A. First, IAWC's analysis provides a review of only three selected municipalities with readily available information in their Comprehensive Annual Financial Reports (CAFRs), annual audits, budgets and capital financing plans that are "sufficient to analyze the water rates, fees and charges for the municipalities." IAWC Ex. 10.20 at 2. While a review of three selected municipalities may illustrate different

approaches to determining revenue requirements, it does not provide evidence that IAWC's cost components that are common to both municipal and privately owned, regulated operations are reasonable or appropriate.

Second, there are a number of statements made in IAWC Exhibit 10.20 that oversimplify the relevant differences in revenue requirements bases. While these simplifications support a general conclusion that comparisons are complicated, they do not support an inference that certain important cost components are simply not incurred by municipalities. For example, Exhibit 10.20 correctly states that:

> *"Under the cash needs approach, depreciation expense, a non-cash item, is not included as an operating expense. IOUs, such as Illinois American however, recover depreciation cost in rates in the accounting period when the cost is accrued. When the cost is recovered as accrued (as it is by IOUs), the customers who benefit from use of the plant pay rates that reflect the applicable depreciation cost. The cost is not deferred for future rate recovery as it may be for MOUs."*

IAWC Ex. 10.20 at 3-4. This statement could be incorrectly interpreted to suggest that costs associated with the wear, repair and obsolescence of property are not included in the cash-basis requirements of municipal utilities. Asset renewal and rehabilitations are included in municipal utilities' revenue requirements and they address the same effects that depreciation is intended to capture. In recent years these costs have become a much more significant cost component with the national movement toward asset management.[2] Rate

[2] In recent years, perhaps marked by the publication of reports such as *The Dawn of the Replacement Era – Reinvesting in Drinking Water Infrastructure* (AWWA, 2001) and The *Clean*

differences driven by the different treatment of depreciation requires consideration of the different ways the depreciation of assets is addressed and scrutiny of depreciation expenses versus municipal utilities' renewal and replacement spending. Municipal utilities do not escape, nor permanently defer, these costs.

Third, municipalities do not escape costs associated with accrued pension and OPEBs for employees but rather may recognize these costs in different time frames than privately owned utilities. Therefore, it is important to keep in mind that the magnitude of differences in revenue requirements associated with accounting treatments of accrued and non-cash items is largely a matter of differences in timing of cost incurrence which, over time, should have a limited effect on cost.

Fourth, assumptions are made, based on the witnesses' experience with other municipalities, for which no supporting evidence is provided and which may be questioned. For example, in relation to Shared Resource Subsidization:

> *It is Stifel's assumption based on our experience with numerous municipalities throughout Illinois that the payment by each of the*

Water and Drinking Water Infrastructure Gap Analysis (USEPA, 2002; EPA-816-R-02-020), the U.S. water and wastewater utility industry has recognized the significant prospective cost impacts of its aging infrastructure assets. Drawing from international experience, perhaps most notably that of Australia, the industry has embraced tenets of asset management as a means to better meet desired customer service levels and manage costs. As defined in *Managing Public Infrastructure Assets to Minimize Costs and Maximize Performance* (AMSA, 2002), for which a project review committee comprised of representatives from AWWA, AMWA, AMSA, and WEF was assembled, asset management fundamentally seeks to minimize the full life-cycle costs of assets while meeting desired service levels at acceptable risks. In practice, this has led utilities to enhance their reinvestment in existing infrastructure (e.g., additional renewal and replacement), improve system maintenance practices, and focus on risks to delivering established customer service levels. Though some near-term increases in costs are typical of utilities engaging in more pronounced asset management, successful utilities have experienced reductions in costs, though the distribution of costs between new infrastructure investment relative to renewal and replacement spending is altered.

MOUs to the General Funds could be understated by approximately 20%. The MOUs, however, did not provide actual data to confirm this estimate.

IAWC Ex. 10.20 at 4. This assumption suggests that the municipalities are further subsidizing water rates (beyond the tax subsidies noted below) to the detriment of other General Fund supported services because the municipalities are not allocating to their water departments all of the costs these departments cause the municipalities to incur. While evidence may suggest otherwise, this assumption seems counter-intuitive given the relatively low cost of water service in these communities and chronic under-funding of General Fund supported services in most municipalities.

Q. What is your experience with the allocation of shared resources between water and sewer utilities or enterprise funds and the general fund?

A. My experience both working for the City of Austin, Texas and in my 15 years of consultancy, almost entirely with municipal water and wastewater utilities, is that most municipalities do not subsidize their water and wastewater operations to the detriment of their General Fund – in fact, quite the opposite is true. In my experience, municipalities have greater difficulty in funding general government services supported by tax levies than enterprise fund services supported by rates and fees. As a consequence, the more common occurrence has been for municipalities to over-allocate costs to enterprise funds to mitigate pressure on general government budgets. This has been the case for most of the municipal owned utilities across the country with whom I have worked including Austin, Texas, Atlanta and Augusta, Georgia, Akron and Cleveland, Ohio and Honolulu, Hawaii to name a few.

The direction of this pressure is recognized by municipal credit rating agencies

as suggested by a recent Standard & Poor's review of its water and sewer ratings practices related to "Flows of Funds – transfers out":

> *The flow of funds also enumerates the issuer's ability to transfer surplus funds out of the system. A reliance on transfers from the utility to the general fund adds to a system's revenue requirements that can result in additional rate pressures for customers. While the ability to retain all surplus funds within a system is certainly a plus, transfers to another fund are not necessarily a negative factor. A well-researched, flexible, consistent and well-communicated transfer policy is likely to offset the concern that such transfers potentially can drain the utility's cash position or constrain management's ability to fund capital improvements from earnings. In general, the general government managers and policy makers will have less room for disagreement and debate if a transfer policy is well established and maintained.*[3]

While this discussion does not specifically relate to shared resource allocations, it is indicative of the nature of allocation pressures in municipal governments. If municipal owned utilities' payments to general funds are typically understated, as assumed without supporting evidence by Stifel in IAWC Exhibit 10.20 at page 4, this practice would seem both unique to regional utilities and at variance with national credit rating agency concerns related to the potential for general governments to "drain the utility's cash position".

Q. Does the difference between rates charged to residents within a

[3] "Public Finance Criteria: Water and Sewer Ratings" by James Wiemken, James Breeding, Theodore Chapman and Edward R. McGlade, Standard and Poor's RATINGSDIRECT, October 5, 2004.

municipality and rates charged by that municipality to residents in unincorporated areas provide any additional information about the effect of shared resources on water rates?

A. Possibly. If a municipality has elected to subsidize its water enterprise fund through understatement of shared resource costs, which as noted above seems a dubious proposition, it seems even more dubious that these rate benefits would be conveyed to residents in unincorporated areas. Accordingly, it seems reasonable to assume that higher municipal utility rates charged to residents of unincorporated areas would reflect, at least in part, exclusion of the benefits of understated shared resource allocations provided to residents within the municipality. Therefore, one mechanism to adjust for the (doubtful) potential understatement of shared resources may be to evaluate IAWC rates in comparison to regional municipal utilities' rates charged to unincorporated areas. Table 1 on page 6 above includes charges to residential customers in incorporated and unincorporated areas where different charges apply.

Q. Is the cost of purchased water from DuPage Water Commission (DWC) as compared to other water supply sources a significant factor in explaining differences in IAWC's customers' monthly charges and those of municipalities that obtain their water entirely or primarily from this source of supply?

A. Yes. Purchased water costs represent almost 53% of IAWC Chicago-Metro District Operating Expenses (before depreciation and taxes).

To the extent that these costs are subsidized by a DuPage Water Commission sales tax levy, the costs for municipal utilities that purchase water from DWC reduce these municipal utilities revenue requirements. IAWC's rates are similarly reduced in those areas where it purchases water from the DWC. IAWC Ex. 10.20 at 24. A very rough estimate of the cost savings that would be realized by

IAWC if all of the purchased water serving the Chicago Metro District was purchased from DWC is $10 million (calculated by comparing actual purchased water costs vs. IAWC Chicago District sales * DWC wholesale sales cost of $0.133/100g). While this is a significant cost component, this difference does not fully address concerns related to the reasonableness of IAWC's Operating Expenses.

Q. Do the costs of purchased water vary among IAWC's Chicago Metro areas?

A. Yes, the purchased water cost varies widely. IAWC has eight purchased water districts. The largest district is Southwest Suburban, which purchases water from an affiliate of IAWC, American Lake Water. The purchased water charge in that area is $3.56 per 1,000 gallons as of January 1, 2008. The next largest area is DuPage, which purchases water from the DuPage Water Commission. The other districts purchase water from various municipalities. Although the purchased water expense has a significant effect on customers' bills, it is not a cost that is recovered in IAWC's revenue requirement because IAWC treats the purchased water cost as a pass-through.

Section II: Comparison of IAWC to AWWA Benchmarks

Q. Excluding consideration of purchased water costs, can you compare IAWC's Operating Expenses to other water utilities nationally?

A. As highlighted in recent work in the water utility sector, benchmarking utility performance in terms of certain basic performance parameters may be instructive. Benchmarks related to operations and maintenance expenses are largely unaffected by the use of cash versus utility basis revenue requirement determinations characteristic of municipal versus investor owned utilities. An analysis of operations expenses enables focused comparisons between IAWC

and municipal utilities elsewhere in the country and in the Chicago region.

Q. Do you see any limitations in using benchmarking to assess utility performance?

A. Benchmarking across multiple utilities has important limitations and by no means offers a precise portrait of utility performance. While it may indicate causes for concern, benchmarking may mute recognition of potentially important differences in requirements for service delivery among utility systems. Systems may require different water treatment processes, have different age distributions and deterioration curves, and have different arrangements for field operations, administration and customer service.

Q. Can you describe the AWWA benchmarking survey?

A. AWWA collected information from 193 water and wastewater systems throughout the United States, including both rate information and cost benchmarking data. Because the 193 systems studied in the benchmarking survey contain data from systems across the entire United States, there is a wide range of physical systems, geographies and operating conditions represented. Nevertheless, utilities around the country are increasingly using the AWWA benchmarks to assess their performance.

Q. Can you explain how the AWWA benchmarking survey was conducted?

A. Yes. The AWWA benchmarking survey reports on information provided by utilities that participated in its 2006 Qualserve Performance Indicators for Water and Wastewater Utilities Survey. The primary objective of the AWWA benchmarking initiative is to "build a performance measurement specific for water and wastewater utilities" (p.iv). The survey collected information on 22 high-level performance indicators from 193 participating utilities, of which 65 were water only utilities, 17 were wastewater only utilities and 111 were combined water and

wastewater utilities. The 193 participating utilities are a broad cross section of utilities in terms of size and geographic distribution, though almost all are publicly owned systems. Specifically, of the 193 participating utilities, 18 serve populations of 0 – 10,000 customers, 43 serve populations of 10,001 – 50,000 customers, 35 serve populations of 50,001 – 100,000, 67 serve populations of 100,001 – 500,000 and 30 serve populations of more than 500,000. Geographically, 11 are located in the northeast U.S., 52 in the Midwest U.S, 62 in the southwest U.S., 61 in the western U.S., 4 in Canada and 3 are outside of North America.

Q. Can you explain what Exhibit EPR-2 represents?

A. Yes. The exhibit shows three benchmarks used in the AWWA Benchmarking Survey: (1) Residential bill per 7500 gallons of water, (2) Operations and Maintenance Cost per Account, and (3) Operations and Maintenance Cost per million gallons (MG) processed. The left hand column shows the cost IAWC incurs in Chicago Metro, excluding purchased water cost. The IAWC O&M cost is further adjusted so that it is shown with and without the maintenance-other expense.[4] The second and third column groups show the results of the AWWA Benchmarking Survey for utilities that provide only water, and for utilities that provide both water and wastewater services. The benchmarks include the operating costs associated with source/supply, treatment, transmission, distribution, customer service and maintenance costs budgeted in these utilities' O&M cost centers.

[4] Although it is plain that IAWC has maintenance expenses, as do the benchmarked utilities, I removed that expense for comparison because of the potential differences in which maintenance costs, comparable to those presented for IAWC, are budgeted by the benchmarked utilities. In some cases, these costs may be included in reported O&M costs while in other cases such comparable costs may be treated as non-CIP capital expenditures. By excluding these costs from the IAWC data, it remains evident that IAWC's non-purchased water operating costs exceed those of benchmarked utilities whether or not data reported for those utilities also include similar

Q. Why did you exclude the cost of purchased water from the IAWC benchmark?

A. IAWC passes the cost of purchased water, ranging from $1.41 per 1,000 gallons in the Moreland area to $3.25 per 1,000 gallons in Waycinden[5], to consumers in the Chicago Metro District. To be conservative and avoid attributing costs to Chicago Metro District that it does not control, I removed all purchased water expenses from Chicago Metro District operating expenses from my O&M analysis. As a result of this adjustment, the Chicago Metro data, which includes transmission, distribution, customer service, administrative and other expenses, is compared to benchmark data that include source /supply, treatment (and maintenance included in O&M budgets), as well as transmission, distribution, customer service, administrative and other O&M expenses comparable to the Chicago Metro data.

Q. Did you make any other adjustments to the data used in Exhibit EPR-2?

A. Yes. Two additional adjustments were made to the data for IAWC which was taken from IAWC Exhibits 3.01 and 17.00. Because IAWC's proposed O&M expenses are for a FY 2009 Test Year, values were reduced by discounting IAWC's proposed O&M Expenses assuming a 4.0% percent annual inflation factor. In addition, for the *"Cost Per Million Gallon Processed / Delivered"* benchmark calculation, IAWC – Chicago Metro sales volumes were adjusted by 20 percent to account for Non-Revenue Water.[6]

Q. How does the Chicago Metro District compare to the AWWA Benchmarks?

A. Despite the conservative adjustments explained above, and noting that

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maintenance expenses.

[5] See Ill. Docket No. 07-0195, Petition and Application, filed March 15, 2007.

[6] My use of 20% to account for non-revenue water is not meant to imply an endorsement of that value as appropriate for ratemaking or any purpose other than my analysis in this testimony.

benchmarked utilities are likely to incur O&M expenses for source of supply, the Chicago Metro District's adjusted (or "net") O&M expenses do not indicate strong efficiencies. The cost per account is significantly higher than the threshold cost reported for the top quartile ($240.21 or $266.68 (including an adjusted maintenance expense) versus $208) and somewhat less than the median benchmark of $276 despite the fact that the costs of the benchmarked utilities (nearly entirely public) include source of supply and treatment in addition to the transmission, distribution and other expenses incurred by IAWC to deliver water.

Comparisons of the net operating costs of the Chicago Metro District and AWWA benchmark utilities is even less favorable on a net O&M per MG processed basis. The median benchmark O & M cost for water-only utilities is $1,360; the Chicago Metro District net O & M per MG processed is $1,990, or 46.3% higher (or including adjusted maintenance $2,209 or 62.4% higher), despite the fact that purchased water costs are excluded from Chicago Metro but may be included by some benchmark utilities. The top quartile operating costs per MG processed were $1,010, about half the Chicago Metro District cost.

As discussed above and in Table 1, and Exhibit EPR-1, the Chicago Metro water rates are quite high compared to neighboring municipal systems' rates. On Exhibit EPR-2, I excluded the purchased water charge from the bill for 7500 gallons to be consistent with the O & M analysis.[7] Nevertheless, the Chicago Metro District bill for 7500 gallons of water, excluding purchased water, is $38.11 at current rates. This is 58% to 61% higher than the median AWWA benchmarked utilities' monthly bill.

[7] The IAWC Chicago Metro charge is for 7,000 gallons because it does not charge for portions of a gallon. The 7,500 gallon measure approximates 10 CCF, (7,480 gallons) which is the unit of measure used by some utilities.

Q. Are the differences in benchmarked utilities' versus Chicago Metro's performance indicators explained by IAWC's Exhibit 10.20?

A. No. IAWC Exhibit 10.20 does not address the more focused question of comparing Chicago Metro's operating expenses to those of municipal utilities. Instead, IAWC Exhibit 10.20 more generally addresses structural differences between municipal cash basis and utility basis revenue requirement determinations. See Section III above. The most significant operating expense cited in IAWC Exhibit 10.20 relates to purchased water expenses. IAWC Ex. 10.20 at 23. Principal other reasons for operating expense differences cited in IAWC Exhibit 10.20, such as timing of recognition of pension, OPEB costs, and service area characteristics, are not readily quantifiable notwithstanding the attempted quantifications contained in IAWC Exhibit 10.20. See Id. at 27, 29. And, as noted above, IAWC's assumptions related to Shared Resource Subsidization are not supported by actual data, seem questionable for regional utilities, and are uncharacteristic of national experience.

Q. What conclusions may and may not be drawn from the differences in benchmarked utilities' vs. IAWC's performance indicators?

A. Although, as suggested in IAWC Exhibit 10.20, the differences in some non-purchased water O&M expenses may be explained in part by differences in service area characteristics and accounting treatments between the benchmark utilities and the Chicago Metro District, one may also reasonably conclude that the promise of efficiencies through centralized administration, corporate customer service, and profit-incentivized private sector business processes remain elusive. The Chicago Metro District's O&M costs, which are unrelated to accounting treatment and should not vary considerably between private and municipally owned systems, are significantly higher than the benchmarks cited in the AWWA survey.

Section III: Comparison of IAWC to Neighboring Municipal Utilities

Q. Have you analyzed IAWC operating expenses relative to selected municipal utilities in the region?

A. Yes. To develop a valid comparison of operating and maintenance expenses, I have used a number of assumptions and supporting calculations due to differences in reporting and available detail in the financial statements and budgets of regional municipal utilities, as noted in IAWC Exhibit 10.20. My analysis is presented in Exhibit EPR -3

Q. What utilities were selected for your analysis and why?

A. Downers Grove, Lemont, Woodridge, and Wheaton were selected. The first three are the same utilities used for purposes of comparison by the Company in its Exhibit 10.20. These utilities presented sufficiently detailed financial information in their budget and audit documents, containing a number of noteworthy assumptions documented in the notes of the associated spreadsheets, to glean relevant information. Wheaton was also reviewed largely due to the ready availability of required documents.

Q. What assumptions were employed in your analysis?

A. As noted in IAWC Exhibit 10.20, municipal utility financial reporting is formatted differently, and basic information on utility statistics were inferred in some cases. In general, conservative assumptions were employed that would tend to overstate adjusted operating expense values assigned to the municipal utilities. Specifically, the following assumptions were employed:

Downers Grove: Data were reported on average daily pumpage and the number of customers. Expense values were derived directly from the Village's 2006 Comprehensive Annual Financial Report (CAFR) and 2007 Budget, where

budgeted values were summarized across all divisions - Financial Services, Administration, Pumping and Treatment.

Lemont: Statistical information – the number of water customers was reported in the CAFR, R-3 as 5174, and average daily pumpage was roughly estimated by reference to the City's 2007 Series Bond Official Statement that notes that the utility had 4530 customers and sold 464 million gallons in 2003. Values of 5000 customers, roughly 3% system growth per annum, and 500 million gallons produced (given growth and system losses) were assumed based on this limited data. Expense values were obtained from the City's 2006 Comprehensive Annual Financial Report and budget documents and aggregated as presented in Exhibit EPR-3. Water Source costs were estimated at 75 percent of reported Electricity/Gas/Phone expenses under the assumption that the vast majority of the expenses in this category relate to well pumping such that a 75 percent allocation would conservatively estimate water source costs.

Woodridge: While the number of customers was reported, the only reference to pumpage was provided on the Village's web site that asserted that the village delivered "1 billion gallons of water to customers each year". The 1 billion gallon value was employed, conservatively with no adjustment for system losses as was made for IAWC pumpage.

Wheaton: Statistical information was available on the number of customers from the City's web site. However pumpage had to be inferred based on reported DuPage Water Commission sales to the City. The DWC values were assumed to represent the entirety of the City's water sources and a 10 percent loss factor was conservatively applied to represent losses between the DWC and Wheaton systems. Purchased water costs were estimated based on Wheaton's water purchases from DWC and the average cost of purchased water listed in the 2006

DWC financial report.

Q. Can you describe Exhibit EPR-3?

A. Exhibit EPR-3 shows the number of customers, average daily pumpage, and the total O&M cost for the Chicago Metro District and the selected municipal utilities listed. Operating Expenses are broken down to the extent possible from available reporting. Several of the municipalities do not break down their expenses into the categories shown for the Chicago Metro District, but the totals include all of these expenses.

The calculation of the net Chicago Metro O&M expense from Exhibit EPR-2 is used here and compared to the average O&M cost for each municipality per account and per MG processed or delivered.

Q. Given the assumptions employed, what conclusions are suggested by your analysis?

A. Similar to the analysis presented in Exhibit EPR-2, my analysis of IAWC's adjusted operating expenses compared to selected regional utilities suggests that Chicago Metro's expenses (excluding purchased water and maintenance expenses) are generally higher than those of selected municipalities in the Chicago region – again suggesting that the promise of private sector efficiencies has not been realized. The corresponding O&M per account cost for Lemont and Woodridge are $186.99 and $209.13 respectively, lower than and very close to the top quartile reported by the AWWA Survey ($208)[8]. Downers Grove and

[8] Lemont breaks out the maintenance cost in its reports, and that cost is removed from the analysis comparing IAWC without maintenance or purchased water. When comparing IAWC with the maintenance expense, I included the maintenance cost reported by Lemont, raising the O&M cost per account to $255.36 for Lemont, as shown on Exhibit EPR-3. The average O&M cost per account including the maintenance fee is $226.01.

Wheaton, at $214.21 and $225.36 respectively, are 3% and 8% higher than the top quartile benchmark. By contrast, Chicago Metro at $240.21 and $266.68 including the adjusted maintenance expense per account is 15.5% and 28.2% more costly than the AWWA top quartile benchmark.

Similarly, Chicago Metro shows a higher cost per MG delivered than the municipal utilities though Chicago Metro costs do not include source/supply, and treatment costs. If the purchased water cost were included in this calculation, Chicago Metro's costs would increase considerably.

Section IV: Capital Expenses

Q. Despite differences in revenue requirement determination methods related to capital cost recovery, can you place differences in municipal vs. investor owned capital expenses into fuller context?

A. Yes. While a full reconciliation of municipal and investor owned revenue requirements is not practical due to the reasons noted in Exhibit 10.20, it is possible to provide additional information about the magnitude of cost differences related to capital costs. For example, a significant difference in determining municipal versus investor owned revenue requirements is the fact that municipal utilities may raise capital using tax-exempt borrowing and contributions (usually from developers or from grants). It would be relatively simple to apply municipal utilities' cost of capital (using terms of a reference 30-year tax-exempt revenue bond, for example) in the calculation of return on IAWC's rate base and determine the rate differential accounted for by this factor.

Q. Have you calculated the return on IAWC's rate base to determine the rate differential?

A. No, but I understand Mr. Christopher C. Thomas, on behalf of the Citizens Utility Board, has identified the municipal cost of debt.

Section V – Adjustment to Chicago Metro O&M Water Expense

Q. Does your review of IAWC's Exhibit 10.20, regional utility financial information and AWWA benchmarking data support any adjustment to IAWC's proposed revenue requirements for the Chicago Metro District?

A. Excluding the maintenance expense entirely, if the Chicago Metro District managed its non-purchased water operating expenses at levels comparable to municipal utilities on my Exhibit EPR-3, and incurred a per account cost of $225, it would have to eliminate approximately $750,000 in operating expenses. Including IAWC's adjusted maintenance cost for Chicago Metro, and comparing it to the average of the four municipal utilities including the maintenance costs that are separately reported, the O&M expense in the Chicago Metro District would have to be reduced by $2,050,000 to reach an O&M per account cost of $225.00.

IAWC does not demonstrate efficiencies that place it on a par with regional municipal utilities and incurs higher operating expenses than utilities in the top quartile of AWWA's national benchmark survey. An adjustment in this amount would result in operating expenses, after deductions for purchased water and maintenance expenses that are comparable to the utilities that IAWC selected for the comparisons presented in Exhibit 10.20.

Section VI: Wastewater Rates

Q. Can you compare the wastewater component of the Chicago Metro bills to a national benchmark?

A. Although there are not cost benchmark surveys readily available to date for U.S. wastewater utilities like the AWWA survey of water utilities, AWWA's national rate survey does include information on wastewater rates, grouping wastewater utilities by size. Group A utilities process more than 70 million gallons per day (mgd), Group B utilities process 20 -70 mgd, and Group C utilities process less than 20 mgd. Because IAWC serves smaller suburban communities in the Chicago area, I compared the wastewater systems in the Chicago Metro District to the smallest systems, Group C.

Q. Are there any significant differences between the Chicago Metro wastewater charges and those in the AWWA wastewater rate survey?

A. Yes. There are differences among the Chicago Metro wastewater rate areas and differences between those rates and the AWWA wastewater rate survey. The Chicago Metro area contains two wastewater rates: one for collection and treatment, and another for collection only. Southwest Suburban, with the most customers, charges customers $45.52 for collection and treatment, while customers in Chicago Suburban and DuPage pay $18.23 for collection only. Some of those customers also pay a purchased treatment cost, but I am not considering that rate element in my analysis.

The rates in the AWWA wastewater rate survey include both collection and treatment. Therefore, the Southwest Suburban rate includes the same services included in the rates shown in the survey, while the Chicago Suburban and the DuPage rates include only a portion of the services provided by the surveyed utilities.

Q. Can you describe Exhibit EPR-4?

A. Exhibit EPR-4 contains data from the 2006 AWWA Water and Wastewater Rate Survey. While there are numerous reasons for considerable variance in

wastewater charges across different communities, the substantial charges imposed by IAWC in the Chicago Metro area as compared to national averages at a minimum beg the question whether substantial efficiencies have been realized in the delivery of these services.

Q. What does the AWWA 2006 Water and Wastewater Rate Survey show?

A. The $45.52 wastewater collection and treatment charge in the Southwest Suburban District of Chicago Metro appears to be at the very upper end of the spectrum for small systems. Referring to data from the 2006 AWWA Water and Wastewater survey for the 79 Group C wastewater utilities, the average bill for a 10 ccf, or approximately 7,500 gallons, residential customer is $26.01 and only 4 utilities have bills in excess of the $45.00 fixed wastewater charge imposed on IAWC customers in the Southwest Suburban District of Chicago Metro.

For the Chicago Suburban and DuPage areas, the $18.23 charge is below the average charge shown in the survey. However, the cost of treating wastewater is not included in this charge, meaning that additional services related to treatment must be obtained from another source

Q. Does this conclude your testimony?

A. Yes.